

SUPERALLOY 1752

Superalloy 1752 is a specially formulated electrode which yields an Inconel type deposit that does not require any special post-weld heat treatment to develop its optimum properties. The weld deposit possesses an excellent ability to resist corrosion and oxidation at high temperatures in applications such as furnace components and reactor vessels. It shows excellent toughness at cryogenic temperatures(upto -269°C). Its high strength coupled with high ductility, good creep and heat resistance at high temperatures (800°C) and excellent low temperature toughness makes it the automatic choice for high as well as low temperature applications. Resistant to scaling up to 1000°C .Thermal stability of structure of the weld deposit is a key feature that makes it able to withstand stresses developed due to thermal shock and thermal cycling. Well suited for welding austenitic ferrite joints. Does not form Cr carbide which is brittle in the ferrite weld deposit transition zone and also does not form after the heat treatments above 300°C .

Applications :

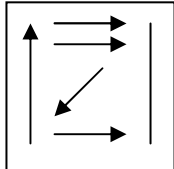
Joining of various types of stainless steels, Ni-base alloys, dissimilar joints, especially austenitic to ferritic steel, welding of weld cladding on low alloy steels, reactor vessels, welding of joints in nuclear engineering, welding of cryogenic steels, anti-wear and anti-corrosion surfacing of furnace components, heat treatment furnaces and fixtures, making transition joints, gate valves in freon gas plants and similar applications. Weld deposit gives tough joints and also used for surfacing on heat resistant Cr and CrNi steels/cast steel grades and Ni-base alloys.

Classifications : EN ISO 14172 AWS A 5.11
E Ni 6082 (NiCr20Mn3Nb) **ENiCrFe-3 (MOD.)**

Procedure:

Superalloy 1752 is an all position weld electrode (except vertical down). For surfacing applications, flat position is recommended. Remove fatigued metal. Preheating is recommended for heavy sections and crack sensitive base metal. Use short arc to medium. Remove slag at every pass and peen the deposit.

Technical Data : **SUPERALLOY 1752**

Welding Condition	: DC + / AC	Welding Position:	
Size (mm)	: 2.5 3.15 4.0		
Recommended Welding Current (Amps)	: 70 - 100 90 – 120 125 – 165		
Tensile Strength	: 620 N/ mm ² (min.)		
Yield Strength	: 420 N/ mm ² (min.)		
Elongation (l = 5d)	: 35% (min.)		
CVN-Impact value at $+20^{\circ}\text{C}$: 90 J (min.)		
Microstructure	: Austenitic		

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